

Unit 2: Linear Motion Test Study Guide

1. You are traveling to Kansas City which is 315 miles away. If it takes you 5.3 hours to get there, what is your average speed?

2. You are running around the track. If you run 900 meters in 150 seconds, what is your average speed?

3. You are driving around Canada. You drive around Toronto for 1.5 hours and went 125 kilometers. What is your average speed?

4. You are traveling to Wichita which is 170 miles away. If it took you 135 minutes to get there, what is your average speed? (put answer in mi/hr)

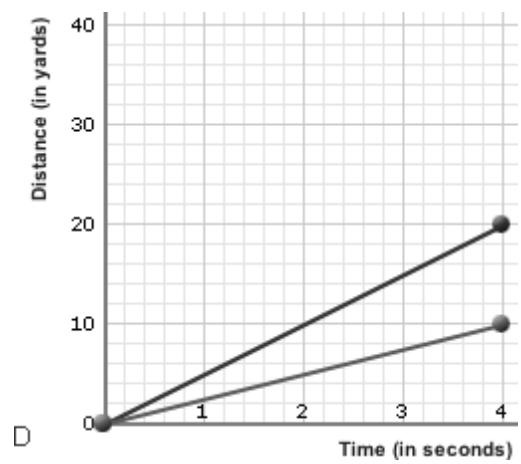
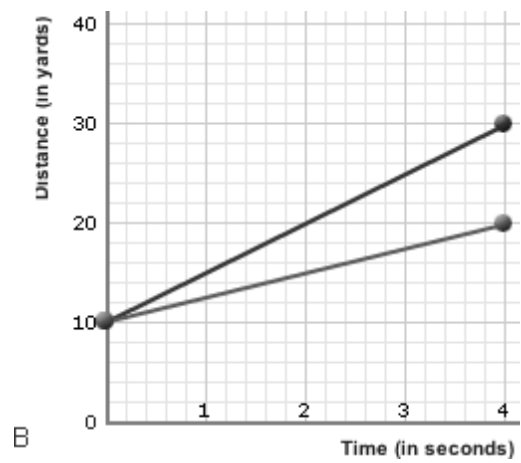
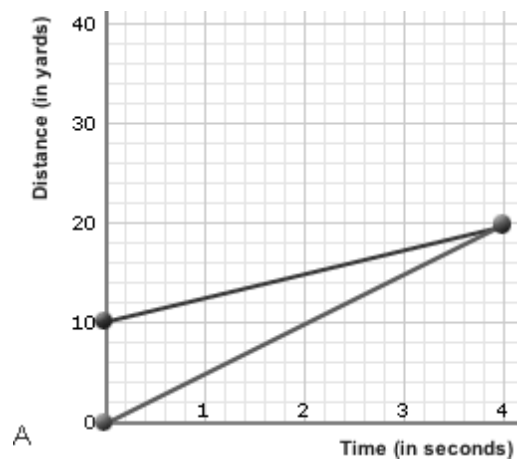
5. You are running around the track. You run 3200 meters in 9.5 minutes. What is your average speed? (put answer in m/s)

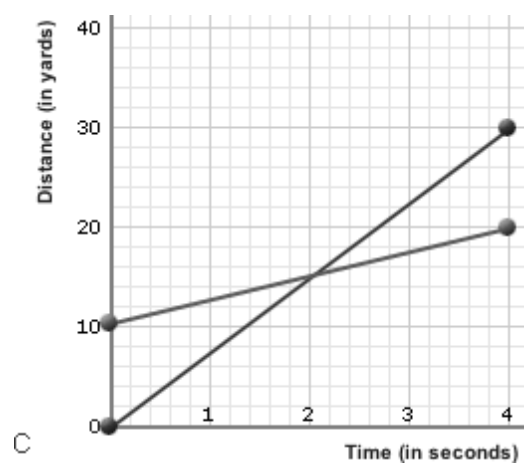
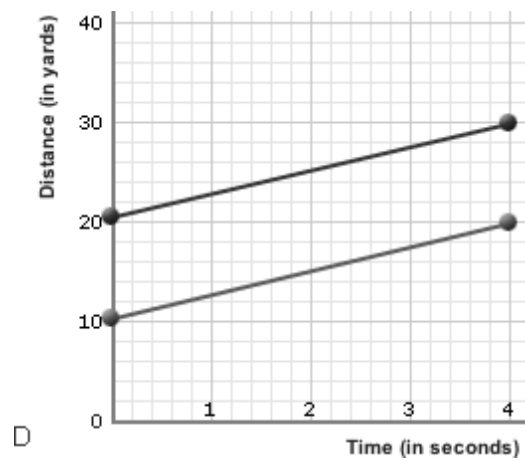
6. You are driving around Canada. You drive around Windsor for 20 minutes and went 25 kilometers. What is your average speed? (put answer in km/hr)

7. You are driving around Canada at 65 mi/hr. You look and see the speed limit is 100 km/hr. Convert your speed to km/hr. Are you speeding?

8. You are driving around Canada still. You are driving at 50 mi/hr. and the speed limit said 85 km/hr. Convert your speed to km/hr. Did the police pull you over for speeding or a broken tail light?

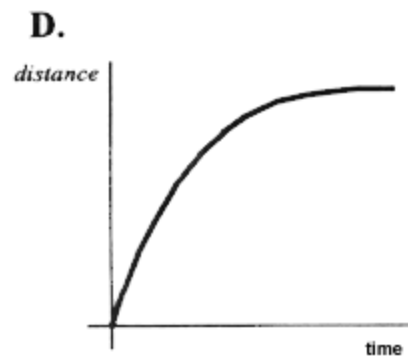
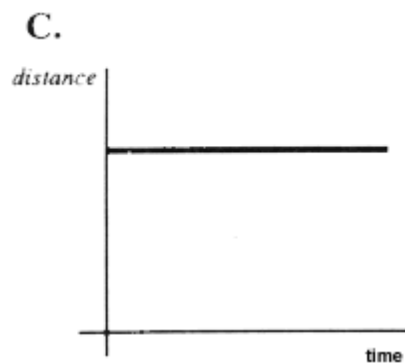
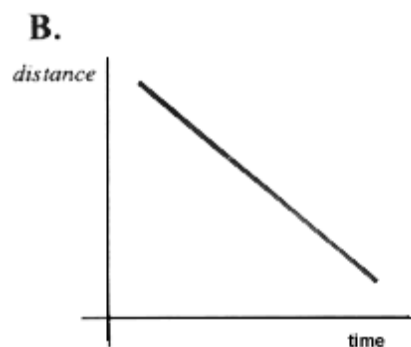
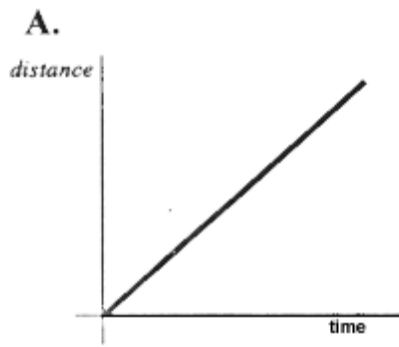
9. Read the following graphs:





10. Label the following graphs:

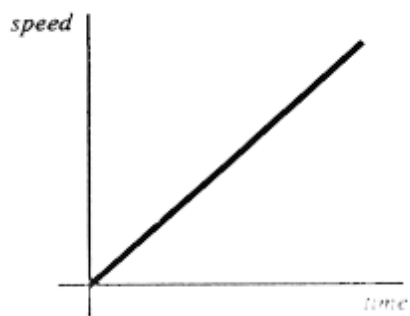
1. the car is stopped
2. the car is traveling at a constant speed
3. the speed of the car is decreasing
4. the car is coming back



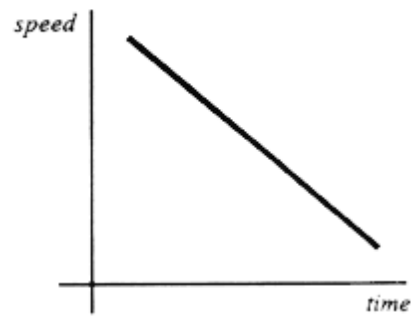
11. Label the following graphs:

1. the car is stopped
2. the car is traveling at a constant speed
3. the car is speeding up
4. the car is slowing down

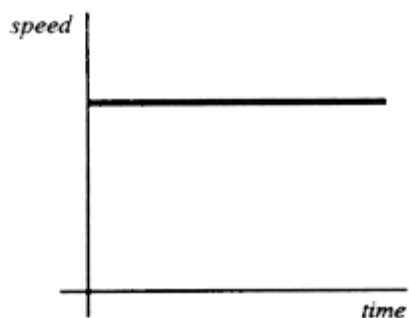
E.



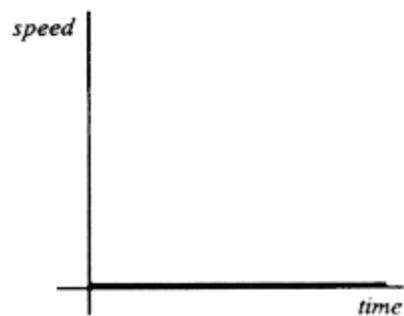
F.



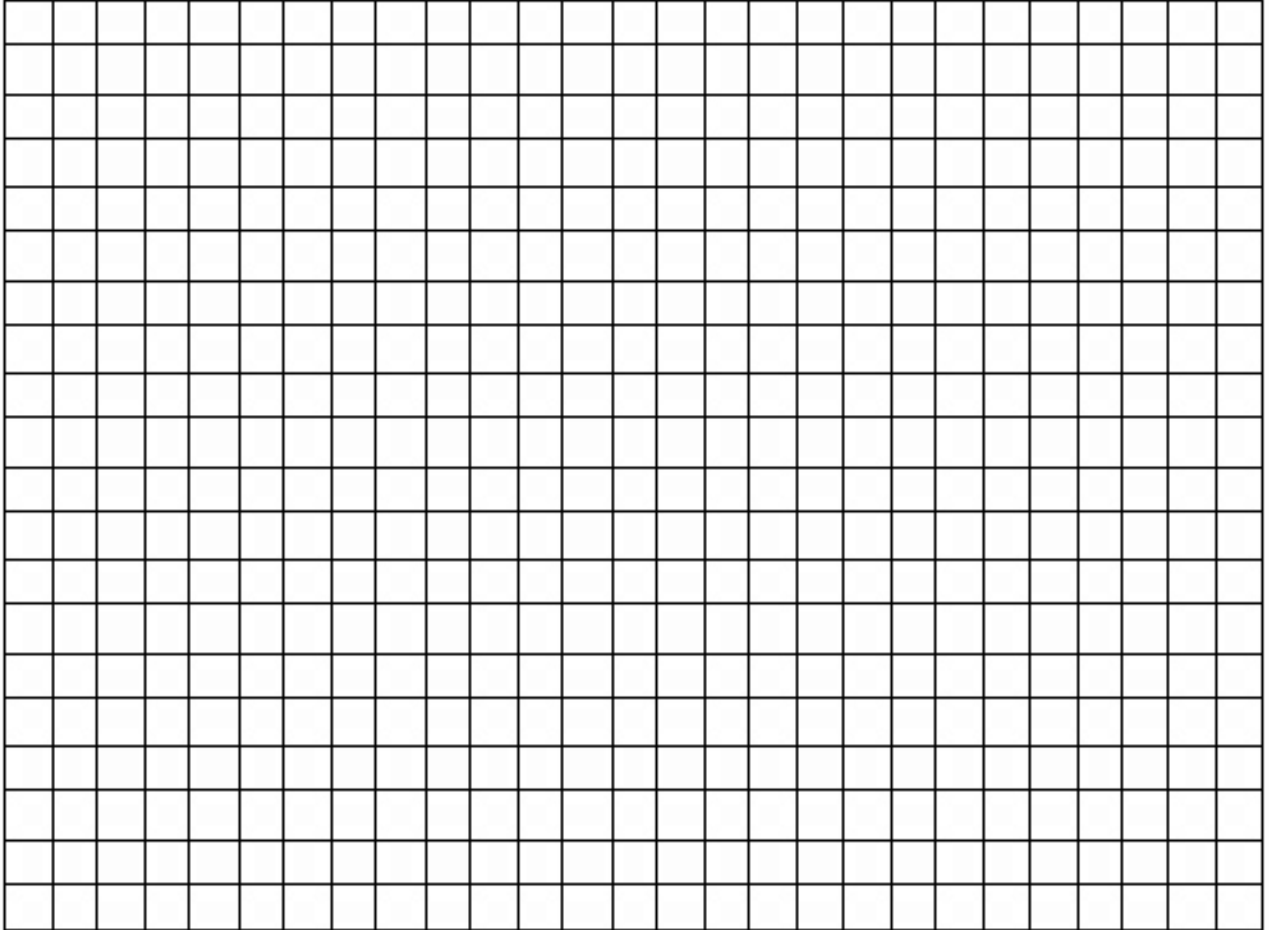
G.



H.



12. Graph the data from the white board:



13. You are running 10 m/s then slow down to 5 m/s. If it took you 3 seconds to slow down, what is your acceleration?

14. You are running 3.5 m/s then speed up to 7 m/s. If it took you 2.5 seconds to speed up, what is your acceleration?

15. You are driving 22 m/s then speed up to 32 m/s. If it took you 6 seconds to speed up, what is your acceleration?

16. You are driving 52 m/s then slow down to 21 m/s. If it took you 5 seconds to slow down, what is your acceleration?

17. You drop a ball from the top of a large building and it falls for 1.5 seconds. How tall is the building? (how far did the ball fall?)

18. You drop a ball from the top of the bleachers and notice it fell for 0.8 seconds. What is the final velocity of the ball?

19. You drop a marble from the top of a large building and it falls for 3.3 seconds. What is the final velocity of the marble?

20. You drop a marble from the top of a large building and it falls for 3.5 seconds. How tall is the building? (how far did the marble fall?)

21. Why do you think it is said that “motion is relative”?